

REMARKS

The application prior to the aforementioned Office Action contained Claims 2-6. Claim 6 was in independent form and Claims 2-5 depended therefrom, either directly or indirectly.

Claims 2-5 were rejected as indefinite. Claims 2-6 were rejected under 35 U.S.C. § 103(a) over two separate combinations of references, (1) Kishida et al. in view of Troy et al ('290) or Carson, and (2) Troy et al ('859) in view of Troy et al ('290) or Carson. Turner et al was also cited.

In response to these rejections, Claims 4, 5 and 6 have been amended. Claim 2 has been cancelled. For the reasons hereinafter discussed, applicants respectfully submit that the claimed invention has been more clearly defined and Claims 3-6 should now be in condition for allowance.

The Examiner contends that the presently claimed invention would have been obvious to one of ordinary skill at the time of the invention based on the Kishida et al reference, which discloses "a core shell impact modifier comprising the innermost layer (A) containing 0 to 49% of a monomer containing a double bond (e.g., Butadiene) and the elastic polymer layer (B) containing 60 to 100% of Butadiene. However, as has previously been discussed, the essential and indispensable ingredient in the innermost layer in Kishida et al is Styrene, and Butadiene is nothing but optional ingredient. As such, applicants' claimed invention is entirely different from the Kishida, et al. In this regard, it should be pointed out that in Kishida et al., Butadiene is polymerized with the essential ingredient Styrene as a seed while, in the present invention, an appropriate amount of a cross-linking agent is used upon polymerizing a seed so that an amount of Butadiene polymer is increased. This effects such results as excellent impact strength, high refractive index and high transparency (see page 6, last paragraph, to page 7, first paragraph, of the specification in the present patent application). The above-mentioned characteristics of the present invention are not disclosed in Kishida et al and, in fact, in Example 1 of Kishida et al, Samples 1 to 5 and Comparative Sample b relate to seeds containing no Butadiene, and Comparative Samples a and c relate to seeds containing Butadiene but no cross-linking agent. All of these Kishida et al., samples have properties inferior to those of the claimed invention.

Regarding Troy et al ('290) and Carson, the examiner contends insists that Troy et al discloses a hydroxyl containing, impact modified polyester applied to amorphous polyesters, and that Carson discloses a similar technology. However, there is a difference between Troy et al and Carson on one hand and the claimed invention on the other hand, insofar as an amount of the

aromatic vinyl monomer contained, i.e. the former being a core polymer comprising from about 40 to about 60 percent by weight of units derived from a vinyl aromatic monomer, while the latter is a copolymer comprising 65 to 95% by weight of a butadiene monomer and 5 to 35% by weight of an aromatic vinyl monomer. Thus, the core polymers in Troy et al. and Carson embody only but conventional technology wherein an amount of a Butadiene polymer composition is low, as stated in the specification of the present application see (page 1, paragraph 3, and page 2.

In order to improve possible defects in the conventional technology, Kishida et al. might be combined with Troy et al. and/or Carson. However, as mentioned above, in Kishida et al. Butadiene is an optional ingredient in the innermost core and, in fact, the innermost core in Examples is Styrene. In other words, the invention, the concept of Kishida et al. is directly contrary to that of the present invention. Therefore, there would be no motivation to combine Troy et al. and/or Carson with Kishida et al., at least in order to realize and complete the present invention.

Referring to the description on column 2, lines 1 to 21, of Troy et al. ('290), the Examiner states that "inner layer core (A-1): Butadiene 25 to 100 and Styrene 0 to 75 of the present invention is formed by "(a) polymerizing in emulsion, in a pressure vessel, a first mixture of monomers, comprising at least 40% butadiene, in the presence of an emulsifier and at least one free radical initiator, until 60%-90% conversion of the monomers to polymer" and then the outer layer core (A-2): Butadiene 50 to 100 and Styrene 0 to 50 of the present invention is formed by the remaining 10 to 40% of Butadiene together with the monomer by "(b) continuing the polymerization of the first mixture of monomers while adding a second mixture of monomers which mixture comprises a vinyl aromatic monomer". However, this is simply an arbitrary assumption of the Examiner, and no description or suggestion of such an effect is found in the prior art.

The object of the present invention is to provide an amorphous polyester resin composition which exhibits high transparency, high impact resistance and improved whitening properties at a low stress, and particularly exhibits whitening resistance under stress in sheet and film form molded products (page 3, second paragraph of the specification of the present patent application) by increasing an amount of Butadiene, taking also realization of matching with the specific refractive index into consideration. On the other hand, in the description of Troy et al. referred to by the examiner, no such disclosure or suggestion of such results are mentioned. At

least, Troy et al does not intend to make matching with refractive index. To even more clearly define the claimed invention in that regard, however, independent Claim 6 clarification is effected to make matching with refractive index as follows:

inner layer core (A-1): BD 25 40 to 80 †00, St 0 20 to 60 75

outer layer core (A2): Bd 50 70 to 100, St 0 to 50 30,

and further, the profile of "cross-linking agent being inner layer core (A-1)>outer layer ore (A-2)" is set forth.

It should, accordingly, be seen that amended independent Claim 6 is neither shown nor suggested by any combination of the Kishida et al, Troy et al ('290), Carson, Troy et al ('859) or Turner et al references. Applicants respectfully submit that Claim 6 (and dependent Claims 3-5) should, as a result, be allowed.

Respectfully submitted,

/Richard G. Lione/
Richard G. Lione
Registration No. 19,795
Attorney for Applicants

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200